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MS 885 (2012) (English): Fresh mangoes -
Specification (First revision)



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MALAYSIAN STANDARD

MS 885:2012

Fresh mangoes - Specification (First revision)

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Committee representation

The Industry Standards Committee on Agriculture (ISC A) under whose authority this Malaysian Standard was developed, comprises representatives from the following organisations:

Department of Agriculture
Department of Standards Malaysia
Department of Veterinary Services
Federal Agricultural Marketing Authority
Forest Research Institute Malaysia
Malaysia Fruit Exporters Association
Malaysian Agricultural Research and Development Institute
Malaysian Association of Standards Users
Malaysian Palm Oil Association
Malaysian Rubber Board
Ministry of Agriculture and Agro-based Industry
Ministry of Plantation Industries & Commodities
Ministry of Science, Technology and Innovation
SIRIM Berhad (Secretariat)
Universiti Kebangsaan Malaysia
Universiti Putra Malaysia

The Technical Committee on Fresh Fruits which supervised the development of this Malaysian Standard consists of representatives from the following organisations:

Department of Agriculture
Federal Agricultural Marketing Authority
Malaysia Fruit Exporters Association
Malaysian Agricultural Research and Development Institute
Malaysian Association of Standards Users
SIRIM Berhad (Secretariat)
Universiti Kebangsaan Malaysia
Universiti Putra Malaysia

The Working Group on Revision for MS on Fresh Fruits which developed this Malaysian Standard consists of representatives from the following organisations:

Department of Agriculture
Federal Agricultural Marketing Authority
Malaysia Fruit Exporters Association
Malaysian Agricultural Research and Development Institute
SIRIM Berhad (Secretariat)
Universiti Putra Malaysia

FOREWORD

This Malaysian Standard was developed by the Working Group on Revision for MS on Fresh Fruits which is under the authority of the Industry Standards Committee on Agriculture.

This Malaysian Standard is the first revision of MS 885, *Specification for the Grading of Mangoes for Fresh-Fruit Consumption*.

Major modifications in this first revision are as follows:

- a) the title has been amended from 'Specification for the Grading of Mangoes for Fresh Fruit Consumption' to 'Fresh mangoes - Specification (First revision)';
- b) incorporation of new clauses on "Normative references" in Clause 2, and "Legal requirements" in Clause 9;
- c) amendment on the "Definitions" in Clause 3;
- d) amendment on the "Minimum requirements" in Clause 4;
- e) inclusion of Table 1, "Size classification" in Clause 5.1;
- f) inclusion of Table 2, "Quality classification" in Clause 5.2; and
- g) amendment on the "Packaging and labelling" in Clause 6.

This Malaysian Standard cancels and replaces MS 885:1984.

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.

Fresh mangoes - Specification (First revision)

1 Scope

This Malaysian Standard prescribes the commercial quality requirements of mangoes, *Mangifera indica* L. of the Anacardiaceae family to be supplied fresh to the consumer. Chokanan mangoes, as well as mangoes for processing are excluded.

2 Normative references

The following normative references are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the normative reference (including any amendments) applies.

MS 78, *Method of sampling for fresh fruits (First revision)*

MS 2302, *Packaging, storage and transportation for fresh tropical fruits - Guidelines*

Federal Agricultural Marketing Authority Act 1965 (Act 141) and Federal Agricultural Marketing Authority (Grading, Packaging and Labelling of Agricultural Produce) Regulations 2008

3 Terms and definitions

For the purposes of this standard the following definitions shall apply:

3.1 similar varietal characteristics

The fruits in any lot is of the same shape, appearance and flesh colour.

3.2 mature

The stage of fruit development having reached full cheek, smooth skin with light green that will ensure proper completion of the ripening process.

3.3 ripe

The stage of fruit where the pulp is soft and aromatic.

3.4 over-ripe

The stage of fruit where the pulp is excessively soft and strongly aromatic.

3.5 clean

Free of dirt, spray residues, resins and other foreign materials.

3.6 well-formed

The fruit which has the typical shape of the variety.

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3.7 defects

Abnormalities, such as skin discolouration, cracks or scars, which affect the overall appearance and quality of the fruit.

3.8 damages

Any injury caused by pests and diseases and mechanical means that may affect the appearance, internal quality, keeping quality and eating quality of the fruit.

3.9 black necrotic stains or trails

Dead tissues on the skin of fruit due to sap burn.

3.10 blemishes

Mark or marks on fruit such as rust, scarring and discolouration which affects its appearance but will not affect the eating quality.

3.11 bruises

Skin discolouration and pulp softening caused by mechanical injury.

3.12 chilling injury

A physiological disorder which develops in fruit due to exposure to chilling temperatures below the optimum level for storage. It is characterised by pitting of the skin and the fruit is unable to ripen.

4 Minimum requirements

4.1 The fruit shall be:

- a) firm, fresh, clean, well-formed and mature but not over-ripe;
- b) free of damages caused by pests and diseases;
- c) practically free from skin damages caused by mechanical means and black necrotic stains or trails;
- d) free from bruises cuts and scratches that reach the flesh;
- e) free of chilling injuries and abnormal external moisture excluding condensation following withdrawal from cold storage; and
- f) free of foreign odour and/or taste.

4.2 When a peduncle is present, it shall be no longer than 0.5 cm and the cut shall be clean.

4.3 The development and condition of the fruit must be such as to enable them to:

- a) withstand transport and handling;
- b) arrive in satisfactory condition at the place of destination.

5 Classification

5.1 Size

5.1.1 Provision concerning size codes are as specified in Table 1.

Table 1. Size classification

Size code	Weight per fruit (g)
A	> 600
B	> 500 - 600
C	> 400 - 500
D	> 300 - 400
E	> 200 - 300
F	150 - 200

5.1.2 For all size classifications, the size tolerance is 10 % by number or weight of fruit not conforming to the size immediately above or below the size range specified.

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5.2 Quality

The fruit is classified into three quality grades as in Table 2.

Table 2. Quality classification

Grade	Requirements	Tolerances
Premium	The fruits shall be of superior quality with characteristics of the variety. They shall be free from defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the fruit, the internal quality, the keeping quality and presentation in the package.	5 % by number or weight of fruit not satisfying the requirements of Premium Grade, but meeting those of Grade 1 or exceptionally, coming within the tolerances of that grade.
1	The fruits shall be of good quality with characteristics of the variety. They shall be slightly free from defects, with the exception of slight superficial defects, provided these do not affect the general appearance of the fruit, the internal quality, the keeping quality and presentation in the package.	10 % by number or weight of fruit not satisfying the requirements of Grade 1, but meeting those of Grade 2 or exceptionally, coming within the tolerances of that grade.
2	This grade includes the fruits which do not qualify for inclusion in the higher grade but satisfy the minimum requirements specified in Clause 4. Slight superficial defects may be allowed provided these do not affect the flesh of the fruit.	10 % by number or weight of fruit satisfying neither the requirements of the grade nor the minimum requirements, with the exception of produce affected by rotting, or any other deterioration rendering it unfit for consumption.

6 Packaging and Labelling

6.1 Packaging

The fruits shall be packed in protective containers to afford maximum protection from normal hazard of transportation and handling. When fruits are presented in packages, the difference between the smallest and the biggest unit in the same package shall not exceed the size tolerance (5.1.2).

The fruits shall be packed in each container in compliance with MS 2302.

6.2 Labelling

Each individual package shall be marked legibly and indelibly or label shall be attached to the package, with the following information:

- a) name of produce and variety;
- b) grade;
- c) size
- d) net weight in kilogrammes;
- e) name and address of grower/supplier/importer and/or exporter; and
- f) country of origin.

6.3 Other aspect of packaging and labelling shall comply with the *Federal Agricultural Marketing Authority Act 1965 (Act 141)* and *Federal Agricultural Marketing Authority (Grading, Packaging and Labelling of Agricultural Produce) Regulations 2008*.

7 Sampling

Sampling shall be carried out as prescribed in MS 78.

8 Compliance with the specification

Upon testing, when each sample is found to conform to the requirements specified in this standard, the lot, batch or consignment from which the sample has been drawn shall be deemed to comply with this standard.

9 Legal requirements

The produce in all other aspects shall comply with the requirements of the legislation currently enforced in Malaysia.

Acknowledgements

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